



**<The application document about the
PUSH XML of C-series phones>**

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1 Revision History

Revision history:

Revision	Author	Date	Description
0.0.0	Adelle	2014-1-20	Introduction about the realization of the push xml, the initial version

2 Introduction

2.1 Overview

With the advent of the information society, the way to access information has significantly changed, various of information exist everywhere, then, users are usually concerned with part, so the contradiction between supply and demand information emerges, in order to ease the contradiction it created a new way of information technology and new services, that is push technology and information push service. The nature of push technology is to let the information find users actively, through the technology it can reflect the advantages –proactive and personalized information service .It can push the information needed to the users actively , so the development of push technology is meaningful. This article is about the basic principles and specific implementation about the PUSH XML of our phone.

2.2 Target Audience

This article is provided to all the members of test group to learn, and, also available for developers/version maintenance, technical support, members of production department to learn about the PUSH information. This specification is developed for C series IP phone testing processes currently.

2.3 Glossary

PUSH XML PUSH XML is the server send information with XML to phone for any purpose. The phone will parse the XML files through appropriate way, and realize related functions. For example, the server send a text or a menu which can be operated by the users (a picture , a picture menu, a command need executed, or a phone book and so on) to the phone.

PHP A general open source scripting languages, short for Hypertext Preprocessor, Chinese name:” PHP, Hypertext Preprocessor”.

3 The implementation about PUSH XML of the C series phone

3.1 The PUSH XML of C-Series phone

At present, the C-Series phone support the file format as, TEXT,MENU,PHONE DIRECTORY, EXECUTE. And the implementation of MENU is just to obtain and display remote phonebook.

Our phone is compatible with Cisco, Yealink, Voismart TEXT, MENU, PHONE DIRECTORY XML file format. Specific implementation method: users can add prefix before the BODY name of the XML flexibly, such as IPPhoneText, We also can add prefix , such as CiscoIPPhoneText, YealinkIPPhoneText,VoismartIPPhoneText, and the XML BODY name of our phone is FanvilIPPhoneText. Menu and PhoneDirectory are similar to TEXT.

Phone will discard the unrecognized element in the XML file, not for processing. The max memory allocated for each XML file is 8K, if the file is larger than 8K, the phone will abandon the file.

The following is the configuration of PUSH XML:

1. Input the IP of the phone, such as: <http://192.168.3.76> enter the login interface, then input the users and password, enter the phone WEB page
2. Enter the PHONE->FEATURE interface, as follow:

AUDIO	FEATURE	DIAL PLAN	CONTACT	REMOTE CONTACT	WEB DIAL	MCAST
Enable Intercom	<input checked="" type="checkbox"/>		Enable Intercom Mute	<input type="checkbox"/>		
Enable Intercom Tone	<input checked="" type="checkbox"/>		Enable Intercom Barge	<input checked="" type="checkbox"/>		
P2P IP Prefix	<input type="text" value="."/>		DND Return Code	<input type="text" value="480(Temporarily Not Available)"/>		
Turn Off Power Light	<input checked="" type="checkbox"/>		Busy Return Code	<input type="text" value="486(Busy Here)"/>		
Emergency Call Number	<input type="text" value="110"/>		Reject Return Code	<input type="text" value="603(Decline)"/>		
Enable Password Dial	<input type="checkbox"/>		Active URI Limit IP	<input type="text"/>		
Password Dial Prefix	<input type="text"/>		Push XML Server	<input type="text"/>		
Password Length	<input type="text" value="0"/> (0~31)		Enable Call Waiting Tone	<input checked="" type="checkbox"/>		
Enable Call History	<input checked="" type="checkbox"/>		Enable Multi Line	<input checked="" type="checkbox"/>		
Enable Default Line	<input type="checkbox"/>		Enable Auto Switch Line	<input checked="" type="checkbox"/>		
Allow IP Call	<input checked="" type="checkbox"/>		Play Dialing DTMF Tone	<input checked="" type="checkbox"/>		
Play Talking DTMF Tone	<input checked="" type="checkbox"/>					

Input a right server address in the Push Xml Server, click Apply, and then the phone will only receive the Push information from this server; if not input server address, the phone can receive the information pushed by any server.

Next, we will introduce the implementation for each XML formats in details. The following is the content that must has in each XML files, you need to input the content, as the TEXT/MENU/DIRECTORY/EXECUTE described below, in the ellipsis space to complete the PUSH file.

```
<?php
function push2phone($server,$phone,$data)
{
$xml = $data;
$post = "POST /xmlService? HTTP/1.1\r\n";
$post .= "Host: $phone\r\n";
$post .= "Referer: $server\r\n";
$post .= "Connection: Keep-Alive\r\n";
$post .= "Content-Type: text/xml\r\n";
$post .= "Content-Length: ".strlen($xml)."\r\n\r\n";
```

```

$fp = @fsockopen ( $phone, 80, $errno, $errstr, 5);
if($fp)
{
fputs($fp, $post.$xml);
flush();
fclose($fp);
}
}
.....
?>

```

3.2 PUSH TEXT

Define

```

<?php
.....
$xml = "<?xml version=\"1.0\" encoding=\"UTF-8\"?>\n";
$xml .= "<FanvilIPPhoneText beep=\"yes\">\n";
$xml .= "<Title> Title text goes here </Title>\n";
$xml .= "<Text> The text to be displayed as the message body goes here
</Text>\n";
$xml .= "</FanvilIPPhoneText>\n";
push2phone("192.168.1.220","192.168.3.76",$xml);
#replace 10.1.3.8 with your Apache ip address
#replace 10.1.3.180 with your phone ip address
?>

```

The following are some elements of this type of XML properties and the features implemented.

Element	Properties	Application
---------	------------	-------------

beep	Whether has warning tone when receive XML documents	beep=yes: the phone will ring when receive the PUSH information beep=no: the phone will not ring when receive the PUSH information
Title	The title of the TEXT file	Displayed at the top of the TEXT page, if the content of the title is too long, it will displayed on a separate line. If the XML file doesn't contain a title, it will not display title, the text displayed to the location of the file directly.
Text	Display the body part of the document	

3.3 PUSH MENU

At present the menu file that C-Series phone support is just to display and download. The following are some elements of this type of XML properties and the features implemented.

Element	Properties	Application
Title	The title of the MENU	Displayed at the top of the TEXT page, if the content of the title is too long, it will displayed on a separate line. If the XML file doesn't contain a title, it will not display title, the text displayed to the location of the file directly
Name	The name of MenuItem	Mark the name of the menu item, and it's only the name of the Beijing_index.xml
URL	Unified resource Tab	Points to a phone book in XML format
MenuIt	Subclasses of	The subclasses of menu displayed on the

em	menu	LCD
----	------	-----

After the XML files parsed, you can learn that the menu list formed by name , and Name displayed in order that determined by their order in the XML, and plus numerical sequence in the front. When you press the up or down navigation key or use the numeric keys directly to select a record to view, the phone will accord to the corresponding URL to download the corresponding Internet phone book and show it in the menu. For example, Beijing_index.xml can be an IPPhoneDirectory, and can also be a DirectoryEntry. If it is the latter, the contact details will displayed on the screen directly after entering the menu.

Note: because the phone capacity is limited, the Menu and downloaded phonebook pushed to the phone is not saved. If there has a pushed message, and you press exit key to exit, you cannot view the message pushed before, because the phone support up to 100 at present.

Example:

```
<?php
.....
$xml = "<?xml version=\"1.0\" encoding=\"UTF-8\"?>\n";
$xml .= "<FanvilIPPhoneMenu beep=\"no\">\n";
$xml .= "<Title>as</Title>\n";
$xml .= "<MenuItem>\n";
$xml .= "<Name>asd</Name>\n";
$xml.="<URL>http://winlie:winline@192.168.1.3/
Beijing_index.xml</URL>\n";
$xml .= "</MenuItem>\n";
$xml .= "<MenuItem>\n";
$xml.="<URL>http://winlie:winline@192.168.1.3/
ShenZhen_index.xml</URL>\n";
$xml .= "</MenuItem>\n";
$xml .= "</FanvilIPPhoneMenu>\r\n";
push2phone("192.168.1.220","192.168.3.76",$xml);
?>
```

3.4 PUSH DIRECTORY

At present, the DirectoryEntry supports elements as following:

Element	Application
---------	-------------

Title	The title of phone book
Name	The name of the contact that in Beijing_index.xml
Telephone	The contact number
Mobile	mobile phone number
Other	other number

The DIRECTORY includes one or more DirectoryEntry, and display the Name list of the DirectoryEntry, and the display order is up to the order the name displayed in the XML. You can press the navigation keys (at present, do not support digital key) to select a record, and enter the record to view detailed information. If there has only one record in the Directory, you can push the message to the phone in DirectoryEntry XML format directly, and the phone will show details of the contact on the screen as soon as receive the message.

Note: because of the limited phone capacity, the phone will not save the pushed Directory. If there has a pushed message, and you press exit key to exit, you cannot view the message pushed before

Example

```
<?php
.....
$xml = "<?xml version=\"1.0\" encoding=\"UTF-8\"?>\n";
$xml .= "<FanvilIPPhoneDirectoryEntry beep=\"no\">\n";
$xml .= "<Title>PbEntry 数字战斗模拟</Title>\n";
$xml .= "<Name>Nevade</Name>\n";
$xml .= "<Telephone>124</Telephone>\n";
#$xml .= "<Mobile>125</Mobile>\n";
#$xml .= "<Other>126</Other>\n";
#$xml .= "<Ring>2</Ring>\n";
#$xml .= "<Group>friend</Group>\n";
$xml .= "</FanvilIPPhoneDirectoryEntry >\n";
push2phone("192.168.1.220","192.168.3.76",$xml);
?>
```

3.5 PUSH EXECUTE

The phone will perform the requested action when receive the excute xml. At present, the phone only can realize two actions by this way, lighting or pressing keys. Lighting LED is light or turn off the lamps as required, Pressing keys is to achieve manually press the button's function. At present, the phone doesn't process in accordance with the priorities of the action, but according to XML Executeltem sequentially in order of execution.

➤ The implementation of LED lights

The format of URI URI="Led:device|ledIndex=colour|blink"

(Note: just to make it easier to distinguish between the properties, there is no specific application, color and blink can be written together or add a space between them.)

Specific properties in the following table:

property	Description	Value and meanings
device	The equipment that can respond to lighting, has "LINE", "DSSKEY", "POWER"	LINE : Line LED DSSKEY : DSS LED POWER : Power LED
ledIndex	Number, marks the same device with different value to make a distinction, practical application, the value closely follow by the device, such as LINE1. If the device is POWER, you can not fill in ledIndex, because there is only one power.	The range of values, depending on the number of the line and DSS keys
color	The color of the light has "OFF", "RED", "PINK"	OFF : No lights GREEN : Bright green lights RED : Bright RED lights PINK : bright PINK lights At present, only DSSKY support this function, the others don't support
blink	Light flashing speed: "OFF", "ON", "SLOWLY", "FAST"	OFF : No lights ON : solid SLOWLY : flash slowly

		FAST : flash quickly
--	--	----------------------

If you don't let the phone lights bright or want to turn off the light, you can input the command as URL="Led:device|ledIndex=OFF"

Example :

```
<FanvilIPPhoneExecute beep="yes">
  <ExecuteItem URL="Led:LINE1=GREEN ON"/>
</FanvilIPPhoneExecute>
```

When the phone receive the command, the phone will turn on the light and solid green light, and ledIndex=1

➤ **Implementation of key response:**

the format of the URI URI="Key:F_KEY= keyString", and the F_KEY refers to keys on the phone keypad

keyString:the type of the key, and the implementation described in the following table

Key type	Description
F_PBOOK	Enter the phonebook
F_REDIAL	Redial the phone number last called
F_TRANSFER	You can press the key to make call forward or call transfer, similar to transfer key
F_LOCK	To lock the keyboard
F_JOIN	join in the conversation
F_PICKUP	pick up the incoming
F_PARK	Resident the incoming calls
F_LOR	Call the last missed call
F_AUTOREDIAL	Enable automatic callback
F_UNAUTOREDIAL	Disable automatic callback
F_DND	DND
F_MWI	Enter the voice mail
F_SMS	Send message
F_CFWD	Call Forward setting
F_CALLERS	Enter the history
F_FLASH	Flash key ,if there is only one talking, press this key to open a new dial interface, if there are two talking, press this key you can switch to the other talking.
F_MEMO	Enter the memo
F_HOLD	Hole key
F_HEADSET	Headset
F_SERVICE	XML Phonebook

F_RELEASE	Release key
F_POWER	Press this key to turn on or turn off the power led
F_SDTMF	Whether to hide the DTMF when in talking
F_PREFIX	Specific format F_PREFIX:DIAL_NUMBER,when press this key it will add the number inputted in the F_PREFIX value to the screen
F_HOTDESK	Enter the Hot Desk setting

Example :

```
<?php
.....
$xml .= "<FanvilIPPhoneExecute beep=\"yes\">\n";
$xml .= "<ExecuteItem URI=\"Key:F_KEY=F_DND\"/>\n";
$xml .= "<ExecuteItem URI=\"Line:LINE2=SLOWLY\"/>\n";
$xml .= "<ExecuteItem URI=\"Key:F_KEY=F_POWER\"/>\n";
$xml .= "</FanvilIPPhoneExecute>\n";
push2phone("192.168.1.220","192.168.3.76",$xml);
?>
```

The phone will executes the actions described as followed after parsing this XML file.
 Ring once->triggered DND key->Line2 key flash slowly->enter the power led setting directly